RECORD AND BRIEFS

FILED
AUG 30 2017
OFFICE OF THE CLERK
SUPREME COURT, U.S.

No. 16-1161

IN THE

Supreme Court of the United States

BEVERLY R. GILL ET AL.,

Appellants,

v.

WILLIAM WHITFORD ET AL.,

Appellees.

On Appeal from the United States District Court for the Western District of Wisconsin

BRIEF OF HEATHER K. GERKEN, JONATHAN N. KATZ, GARY KING, LARRY J. SABATO, AND SAMUEL S.-H. WANG AS *AMICI CURIAE* IN SUPPORT OF APPELLEES

Kevin K. Russell
GOLDSTEIN & RUSSELL, P.C.
7475 Wisconsin Ave.
Suite 850
Washington, DC 20814

Heather K. Gerken
Counsel of Record
127 Wall Street
New Haven, CT 06511
(203) 432-1660
heather.k.gerken@yale.edu

WILSON-EPES PRINTING CO., INC – (202) 789-0096 – WASHINGTON, D C 20002

TABLE OF CONTENTS

INTEREST OF AMICI CURIAE 1

SUMMARY OF ARGUMENT 4

ARGUMENT 5

I. The Court's Long-Standing Practice Is To Identify A Workable Principle That Lends Itself To A Manageable Test While Allowing The Lower Courts To Refine That Test Over Time 6

A. The Court Has Repeatedly Followed This Cautious Practice In Elections Cases. 7

B. This Circumspect Approach Is Not Limited To Elections Cases. 10

C. Now Is The Time For The Court To Act. 12

II. Partisan Symmetry Is A Workable Standard With Ancient Roots And Overwhelming Support From Social Scientists. 13

A. Partisan Symmetry Is A Deeply Intuitive Standard With Ancient Roots. 14

B. Social Scientists Resoundingly Support A Partisan Symmetry Standard. 15

III. Partisan Symmetry Lends Itself To A Manageable Test With Many Doctrinal Virtues.. 17

A. Partisan Symmetry Relies On The Most Basic Statistical Measures And Is Thus Transparent And Easy To Calculate Without Undue Reliance On Experts. 18

B. Partisan-Symmetry Tests Differ Fundamentally From A Proportional Representation Standard. 21

C. Partisan Symmetry Tests Can Distinguish Between Partisan Manipulation And The Effects Of Traditional Districting Principles. 22

D. Because Symmetry Tests Do Not Rely On Subjective Judicial Judgments, They Generate Highly Predictable Measures That Do Not Displace Appropriate Districting Criteria. 23

E. Symmetry Tests Measure Opportunity, Not Outcome, And Are Thus Tailored To The Constitutional Harm At Issue. 24

F. Partisan Symmetry Tests Are Flexible And Can Be Deployed Simultaneously To Ensure That Judges Can Identify Extreme Outliers And Be Confident In The Robustness Of Their Findings. 25

IV. Wisconsin's Legislative Districts Would Fail Under Virtually Any Partisan-Symmetry Test The Court Might Choose. 26

CONCLUSION 28

TABLE OF AUTHORITIES

Cases

Avery v. Midland Cty.,
390 U.S. 474 (1968) 8

Baker v. Carr,
369 U.S. 186 (1962) 6, 7

Bartlett v. Strickland,
556 U.S. 1 (2009) 9

Bazemore v. Friday,
478 U.S. 385 (1986) (per curiam) 14, 19

Brown v. Bd. of Educ.,
347 U.S. 483 (1954) 7, 10

Burdick v. Takushi,
504 U.S. 428 (1992) 7

Bush v. Vera,
517 U.S. 952 (1996) 10, 23

California Democratic Party v. Jones,
530 U.S. 567 (2000) 7

Campos v. City of Baytown,
840 F.2d 1240 (5th Cir. 1988) 9

Castaneda v. Partida,
430 U.S. 482 (1977) 19

Citizens United v. FEC,
558 U.S. 310 (2010) 6

Covington v. North Carolina,
316 F.R.D. 117 (M.D.N.C. 2016), *aff'd*, 137 S. Ct. 2211 (2017) (mem) 10

Crawford v. Marion Cty. Election Bd.,
553 U.S. 181 (2008) 7

Davis v. Bandemer,
478 U.S. 109 (1986). 23

FTC v. Actavis, Inc.,
133 S. Ct. 2223 (2013) 11

General Elec. Co. v. Joiner,
522 U.S. 136 (1997) 19

Global-Tech Appliances, Inc. v. SEB S.A.,
563 U.S. 754 (2011) 11

Green v. Cty. Sch. Bd.,
391 U.S. 430 (1968) 10

Grutter v. Bollinger,
539 U.S. 306 (2003) 7

Harris v. Forklift Systems, Inc.,
510 U.S. 17 (1993) 11

Havens Realty Corp. v. Coleman,
455 U.S. 363 (1982) 15

Johnson v. De Grandy,
512 U.S. 997 (1994) 9

Karcher v. Daggett,
462 U.S. 725 (1983) 8, 21

Keyes v. Sch. Dist. No. 1,
413 U.S. 189 (1973) 10

Kirkpatrick v. Preisler,
394 U.S. 526 (1969) 8

League of United Latin Am. Citizens (LULAC) v. Perry,
548 U.S. 399 (2006) ..... passim

League of United Latin Am. Citizens v. Clements,
999 F.2d 831 (5th Cir. 1993) 9

Loving v. Virginia,
388 U.S. 1 (1967) 7

Mahan v. Howell,
410 U.S. 315 (1973) 8

Maslenjak v. United States,
137 S. Ct. 1918 (2017) 5, 12

Matrixx Initiatives, Inc. v. Siracusano,
563 U.S. 27 (2011) 19

McConnell v. FEC,
540 U.S. 93 (2003) 6, 12

Miller v. Johnson,
515 U.S. 900 (1995) 10, 16

Obergefell v. Hodges,
135 S. Ct. 2584 (2015) 7

Pennsylvania Coal Co. v. Mahon,
260 U.S. 393 (1922) 11

Reynolds v. Sims,
377 U.S. 533 (1964) 8

Shaw v. Reno,
509 U.S. 630 (1993) 6, 9

State Farm Mutual Auto. Ins. Co. v. Campbell,
538 U.S. 408 (2003) 11

Swann v. Charlotte-Mecklenburg Bd. of Educ.,
402 U.S. 1 (1971) 10

Texas v. Johnson,
491 U.S. 397 (1989) 7

Thornburg v. Gingles,
478 U.S. 30 (1986) 9, 24

United States v. Lovasco,
431 U.S. 783 (1977) 11

Utah v. Evans,
536 U.S. 452 (2002) 6

Vieth v. Jubelirer,
541 U.S. 267 (2004) 5, 20, 21, 25

Wesberry v. Sanders,
376 U.S. 1 (1964) 8

White v. Weiser,
412 U.S. 783 (1973) 8, 23

Whitford v. Gill,
218 F. Supp. 3d 837 (W.D. Wis. 2016) 5, 13, 25

Wilson v. Arkansas,
514 U.S. 927 (1995) 11

Other Authorities

Michael Altman & Michael P. McDonald, *BARD: Better Automated Redistricting*,
42 JOURNAL OF STATISTICAL SOFTWARE 1 (2011) 22

Americans Across Party Lines Oppose Common Gerrymandering Practices, HARRIS INTERACTIVE (Nov. 7, 2013), http://www.theharrispoll.com/politics/Americans_Across_Party_Lines_Oppose_Common_Gerrymandering_Practices.html 7

John Arbuthnott, *An Argument for Divine Providence, Taken from the Constant Regularity Observ'd in the Births of Both Sexes*,
27 PHIL. TRANSACTIONS ROYAL SOC'Y 186 (1710) 19

Georges Louis Leclerc Buffon, Histoire Naturelle, Générale et Particulière (Suppl ément, Tome Quatrième (1777)) 22

Jowei Chen & Jonathan Rodden, *Cutting Through the Thicket: Redistricting Simulations and the Detection of Partisan Gerrymanders*, 14 ELECTION L.J. 331 (2015) 22

CINDERELLA ACROSS CULTURES (Martine Hennard Dutheil de la Rochère et al. eds., 2016) 15

Benjamin Fifield et al., *A New Automated Redistricting Simulator Using Markov Chain Monetecarlo*, available at http://imai.princeton.edu/research/files/redist.pdf 22

RONALD A. FISHER, STATISTICAL METHODS FOR RESEARCH WORKERS (11th ed. 1950) 19

Joshua Fougere, Stephen Ansolabehere & Nathaniel Persily, *Partisanship, Public Opinion, and Redistricting*, 9 ELECTION L.J. 325 (2010) 7

Andrew Gelman & Gary King, *A Unified Method of Evaluating Electoral Systems and Redistricting Plans*, 38 AM. J. OF POL. SCIENCE 514 (1994) 14

Andrew Gelman & Gary King, *Estimating the Electoral Consequences of Legislative Redistricting*, 85 J. AM. STAT. ASSOC. 274 (1990) 12, 18, 20, 24

Andrew Gelman, Gary King, & Andrew Thomas, *JudgeIt II: A Program for Evaluating Electoral Systems and Redistricting Plans* (2010), *available at* http://j.mp/2ovSNfh 23

Genesis 13:8-9 15

Heather K. Gerken, *Second Order Diversity*, 118 HARV. L. REV. 1099 (2005) 15

W.S. GILBERT & ARTHUR SULLIVAN, H.M.S. PINAFORE (1878) 15

Bernard Grofman & Gary King, *The Future of Partisan Symmetry as a Judicial Test for Partisan Gerrymandering After* LULAC v. Perry, 6 ELECTION L.J. 2 (2007) 16, 20

Intervening Defendants' Brief in Response to the Court's April 24, 2002 Case Management Order at 3-5, *O'Lear v. Miller*, 222 F. Supp. 2d 850 (E.D. Mich. 2002) (No. 2:01-cv-72584-JAC-PJK) 17

Gary King & Robert X. Browning, *Democratic Representation and Partisan Bias in Congressional Elections*, 81 AM. POL. SCI. REV. 1251 (1987) 15

CARL KLARNER ET AL, STATE LEGISLATIVE ELECTION RETURNS DATA, 1967-2010 (Harvard Dataverse V1, hdl:1902.1/20401, UNF:5:q/n5C9RQGfjy6AjbLG6JWQ==, 2013) 26

Richard Lowry, CONCEPTS AND APPLICATIONS OF INFERENTIAL STATISTICS, http://vassarstats.net/textbook/ch11pt1.html 19

Matthew 7:12 15

Michael D. McDonald & Robin E. Best, *Unfair Partisan Gerrymanders in Politics and Law: A Diagnostic Applied to Six Cases*, 14 ELECTION L.J. 312 (2015) 16, 20

Anthony J. McGann et al., *A Discernable and Manageable Standard for Partisan Gerrymandering*, 14 ELECTION L.J. 295 (2015) 16

John F. Nagle, *Measures of Partisan Bias for Legislating Fair Elections*, 14 ELECTION L.J. 346 (2015) 16, 20

Karl Pearson, *Contributions to the Mathematical Theory of Evolution, II: Skew Variation in Homogeneous Material*, PHIL. TRANSACTIONS ROYAL SOC'Y (1895) 21

Petitioner's Opening Brief, *Maestas v. Hall*, 274 P.3d 66 (N.M. 2012) (No. 33,387), 2012 WL 3236221 17

Plaintiffs' Initial Closing Brief, *Romo v. Detzner*, No. 2012-CA-000412, 2014 WL 3797315 (Fla. Cir. Ct. July 10, 2014) (Nos. 2012-CA-000412, 2012-CA-00490), 2014 WL 4254379 17

PRINCETON GERRYMANDERING PROJECT, gerrymander.princeton.edu 23

JOHN RAWLS, A THEORY OF JUSTICE (rev. ed. 1999) 15

RICHARD RHODES, THE MAKING OF THE ATOMIC BOMB (1986) 22

WILLIAM SHAKESPEARE, A MID-SUMMER NIGHT'S DREAM 15

WILLIAM SHAKESPEARE, TWELFTH NIGHT 15

Nicholas O. Stephanopoulos & Eric M. McGhee, *Partisan Gerrymandering and the Efficiency Gap*, 82 U. CHI. L. REV. 831 (2015) 12, 16, 20

Student, *The Probable Error of a Mean*, 6 BIOMETRIKA 1 (1908) 19, 20

Wendy K. Tam Cho & Yan Y. Liu, *Toward a Talismanic Redistricting Tool: A Computational Method for Identifying Extreme Redistricting Plans*, 15 ELECTION L.J. 351 (2016) 22

MARK TWAIN, THE PRINCE AND THE PAUPER (1881) 15

G. UDNY YULE & MAURICE G. KENDALL, AN INTRODUCTION TO THE THEORY OF STATISTICS (3d ed. 1950) 19

Sam Wang, *Let Math Save Our Democracy*, N.Y. TIMES, Dec. 5, 2015 27

Samuel S.-H. Wang, *Three Practical Tests for Gerrymandering: Application to Maryland and Wisconsin*, 15 ELECTION L.J. 367 (2016) 25, 26, 27

Samuel S.-H. Wang, *Three Tests for Practical Evaluation of Partisan Gerrymandering*, 68 STAN. L. REV. 1263 (2016) ..... passim

INTEREST OF *AMICI CURIAE*[1]

Amici Heather K. Gerken, Jonathan N. Katz, Gary King, and Samuel S.-H. Wang are experts in the study of elections.[2] They seek to share their knowledge with the Court about the partisan symmetry standard.

Amicus Heather K. Gerken is the Dean and the Sol & Lillian Goldman Professor of Law at Yale Law School. One of the country's leading experts in the fields of election and constitutional law, her scholarly work includes articles on race, politics, and redistricting. Her work has been the subject of several symposia and featured in the *Atlantic,* the *Boston Globe,* and the *New York Times*, among other journals. Her 2009 book, *The Democracy Index: Why Our Election System is Failing and How To Fix It*, led the Pew Charitable Trust to create an Election Performance Index. Dean Gerken is a member of the American Academy of Arts and Sciences.

Amicus Jonathan N. Katz is the Kay Sugahara Professor of Social Sciences and Statistics at the California Institute of Technology. He is an elected fellow of the American Academy of Arts and Sciences and the Society for Political Methodology as well as a former fellow of the Center for Advanced Study in the

---

[1] All parties have consented in writing to the filing of this brief through letters on file with the Clerk. No counsel for a party authored this brief in whole or in part, and no person other than *amici curiae* and their counsel made a monetary contribution intended to fund the preparation or submission of this brief.

[2] Title and institutional affiliation are provided for identification purposes only. The views expressed herein should not be regarded as those of the institution.

Behavioral Sciences. He has written numerous articles published in leading journals and is currently the co-editor of *Political Analysis*, the journal of the Society for Political Methodology. Professor Katz has done extensive research on American elections and on statistical methods for analyzing political science data. A member of the Caltech/MIT Voting Technology Project, he has testified or consulted in numerous elections cases for both Democratic and Republican clients.

Amicus Gary King is the Albert J. Weatherhead III University Professor at Harvard University and Director of the Institute for Quantitative Social Science. King develops and applies empirical methods in many areas of social science research, focusing on innovations that span the range from statistical theory to practical application. King is an elected Fellow in eight honorary societies and has won more than forty "best of" awards for his work. King was elected President of the Society for Political Methodology (1997-1999) and Vice President of the American Political Science Association (2003-2004). He has been a member of the Senior Editorial Board at *Science* (2015-2016), Visiting Fellow at Oxford (1994), and Senior Science Adviser to the World Health Organization (1998-2003). His more than 150 journal articles, 20 open source software packages, and eight books span most aspects of political methodology, many fields of political science, and several other scholarly disciplines. Professor King's work on legislative redistricting has been used in most American states by legislators, judges, lawyers, political parties, private parties, and the United States Supreme Court.

Amicus Larry J. Sabato is the director of the University of Virginia Center for Politics and the Robert Kent Gooch Professor of Politics. He is a leading expert on American politics. His weekly e-newsletter, "Sabato's Crystal Ball," is a widely read publication about elections. Professor Sabato has written or edited twenty-five books on politics. In his forty years at the University of Virginia, Sabato has taught 20,000 students and has received the University's highest honor, the Thomas Jefferson Award. He has also won three Emmys for historical documentaries produced for public television.

Amicus Samuel S.-H. Wang is a professor of neuroscience and molecular biology at Princeton University, and faculty associate in the Program in Law and Public Affairs. He is well known for developing statistical methods to analyze United States elections, and he is the author of several works on statistical methods to detect partisan bias in redistricting. His election work has won awards from the *Washington Post* and Common Cause, and has been featured in the *New York Times*, the *Wall Street Journal*, the *Los Angeles Times*, and other publications. Professor Wang has also received a National Science Foundation Young Investigator Award and a McKnight Technological Innovations in Neuroscience Award for his work investigating the brain. In 2015, Governor Chris Christie appointed Professor Wang to the New Jersey Governor's Council for Medical Research and Treatment of Autism.

SUMMARY OF ARGUMENT

Plaintiffs ask this Court to do what it has done many times before. For generations, it has resolved cases involving elections and cases on which elections ride. It has adjudicated controversies that divide the American people and those, like this one, where Americans are largely in agreement. In doing so, the Court has sensibly adhered to its long-standing and circumspect approach: it has announced a workable principle, one that lends itself to a manageable test, while allowing the lower courts to work out the precise contours of that test with time and experience.

Partisan symmetry, the principle put forward by the plaintiffs, is just such a workable principle. The standard is highly intuitive, deeply rooted in history, and accepted by virtually all social scientists. Tests for partisan symmetry are reliable, transparent, and easy to calculate without undue reliance on experts or unnecessary judicial intrusion on state redistricting judgments. Under any of these tests, Wisconsin's districts cannot withstand constitutional scrutiny.

ARGUMENT

The path for resolving this case is clear because the Court has trod it so many times before. For generations, the Court has resolved controversies involving elections and those on which elections ride. It has decided cases that affect every part of the democratic process. It has adjudicated questions that divide us and those where, as here, the American people are largely in agreement.

In most of these cases, the Court has followed the same circumspect and sensible route. It has articulated a constitutional principle and identified a "workable standard," *Vieth v. Jubelirer*, 541 U.S. 267, 311 (2004) (Kennedy, J., concurring in the judgment), for vindicating that principle while leaving the precise test to the "crucible of adversarial testing," *Maslenjak v. United States*, 137 S. Ct. 1918, 1931 (2017) (Gorsuch, J., concurring).

Here, the constitutional principle animating plaintiffs' complaint is easy to grasp. In order to protect its own control of the legislature, one political party has hijacked the power of the state in order to "ma[k]e fruitless," *League of United Latin Am. Citizens (LULAC) v. Perry*, 548 U.S. 399, 440 (2006), another party's efforts to mobilize and put its members' ideas into action. As a result, plaintiffs allege that Wisconsin's legislative maps make it harder for one party to control the state legislature than the other. *Whitford v. Gill*, 218 F. Supp. 3d 837, 854-55 (W.D. Wis. 2016).

A workable standard for vindicating this principle is readily available: partisan symmetry. Partisan symmetry has its roots in the simplest, most intuitive

test for detecting discrimination: what would happen if the tables were turned? Social scientists have overwhelmingly endorsed the partisan-symmetry standard, and for decades courts have deployed similar tests in other areas of the law.

While this Court need not identify the precise test for measuring partisan symmetry, the Court must assure itself that the standard lends itself to a manageable test. Measures of partisan symmetry must be transparent, difficult to manipulate, adaptable to context, and assessed without undue reliance on experts. Partisan-symmetry tests can easily meet those conditions.

Under any partisan-symmetry test, Wisconsin's legislative districts are grossly asymmetrical. Measured against other states, Wisconsin's map is extreme. As a result, the Court can affirm the decision of the district court without privileging a specific test.

I. The Court's Long-Standing Practice Is To Identify A Workable Principle That Lends Itself To A Manageable Test While Allowing The Lower Courts To Refine That Test Over Time.

The Court has long adjudicated cases involving elections. It has entertained constitutional claims governing virtually every aspect of the election system, including apportionment, *Utah v. Evans*, 536 U.S. 452 (2002); districting, *LULAC v. Perry*, 548 U.S. 399 (2006); *Shaw v. Reno*, 509 U.S. 630 (1993); *Baker v. Carr*, 369 U.S. 186 (1962); campaign finance, *Citizens United v. FEC*, 558 U.S. 310 (2010); *McConnell v. FEC*, 540 U.S. 93 (2003); election administration, *Crawford v. Marion Cty. Election Bd.*,

553 U.S. 181 (2008); *Burdick v. Takushi*, 504 U.S. 428 (1992); and party regulation, *California Democratic Party v. Jones*, 530 U.S. 567 (2000). Nor has the Court shirked its constitutional duties in cases that – unlike this one[3] – divide the American people. *See, e.g.*, *Obergefell v. Hodges*, 135 S. Ct. 2584 (2015); *Grutter v. Bollinger*, 539 U.S. 306 (2003); *Texas v. Johnson*, 491 U.S. 397 (1989); *Loving v. Virginia*, 388 U.S. 1 (1967); *Brown v. Bd. of Educ.*, 347 U.S. 483 (1954).

A. The Court Has Repeatedly Followed This Cautious Practice In Elections Cases.

In most elections cases, the Court has wisely followed the same cautious course. It has articulated a workable principle that lends itself to a manageable test while allowing the lower courts to adapt and refine that test over time. That same approach has also informed its work in other areas, including some of the most contentious cases in constitutional law.

This Court has taken this circumspect approach repeatedly in the context of districting. In the wake of its pronouncements in *Baker*, the Court identified the

---

[3] Seventy-one percent of Americans believe that those who stand to benefit from redistricting should not have a say in how they are redrawn. *Americans Across Party Lines Oppose Common Gerrymandering Practices*, HARRIS INTERACTIVE (Nov. 7, 2013), http://www.theharrispoll.com/politics/Americans_Across_Party_Lines_Oppose_Common_Gerrymandering_Practices.html. People across the political spectrum, including 74% of Republicans, 73% of Democrats, and 71% of independent voters, subscribe to this view. *Id.*; *see also* Joshua Fougere, Stephen Ansolabehere & Nathaniel Persily, Partisanship, Public Opinion, and Redistricting, 9 ELECTION L.J. 325, 325 (2010).

core principle undergirding the constitutional claim in broad, general terms. The Constitution, the Court wrote in *Wesberry v. Sanders*, "mak[es] equal representation for equal numbers of people the fundamental goal for the House of Representatives." 376 U.S. 1, 18 (1964). So, too, in *Reynolds v. Sims*, this Court held that "[f]ull and effective participation by all citizens in state government requires . . . that each citizen have an equally effective voice in the election of members of his state legislature." 377 U.S. 533, 565 (1964).

In neither of these early cases did the Court identify the precise test for assessing violations of the one person, one vote principle. *See id.* at 569, 579; *Wesberry*, 376 U.S. at 18. Instead, it allowed the lower courts to refine and adapt this principle to fact patterns raised by subsequent litigation before settling on an enduring test. As the Court predicted in *Reynolds*, "[l]ower courts can and assuredly will work out more concrete and specific standards for evaluating state legislative apportionment schemes in the context of actual litigation." 377 U.S. at 578. Its view that "[d]eveloping a body of doctrine on a case-by-case basis . . . provide[s] the most satisfactory means of arriving at detailed constitutional requirements," *id.*, in redistricting was amply borne out by subsequent decisions. *See, e.g.*, *Karcher v. Daggett*, 462 U.S. 725 (1983); *White v. Weiser*, 412 U.S. 783 (1973); *Mahan v. Howell*, 410 U.S. 315 (1973); *Wells v. Rockefeller*, 394 U.S. 542 (1969); *Kirkpatrick v. Preisler*, 394 U.S. 526 (1969); *Avery v. Midland Cty.*, 390 U.S. 474 (1968).

The Court has proceeded in a similarly careful fashion in the context of the Voting Rights Act,

crafting doctrines to govern the often-fraught intersection of politics and race. In *Thornburg v. Gingles*, this Court declined to establish a "simple doctrinal test for the existence of legally significant racial bloc voting," 478 U.S. 30, 58 (1986), choosing instead to offer "general principles [to] provide courts with substantial guidance in determining" whether unlawful vote dilution has occurred. *Id.* at 58-59. And in *Johnson v. De Grandy*, the Court deliberately developed a "substantial proportionality" standard without fashioning a mechanistic test. 512 U.S. 997, 1016 (1994); *see also id.* at 1020-21 ("No single statistic provides courts with a shortcut to determine whether a set of single-member districts unlawfully dilutes minority voting strength."). Over time, with the assistance of the lower courts[4] and the benefit of experience, the Court has refined these tests to protect equal minority participation without "unnecessarily infus[ing] race into virtually every redistricting." *LULAC*, 548 U.S. at 405; *see also Bartlett v. Strickland*, 556 U.S. 1, 14 (2009).

The Court's racial gerrymandering jurisprudence has followed the same path. In *Shaw*, the Court announced that "race-based districting by our state legislatures demands close judicial scrutiny." 509 U.S. at 657. Over time, with the benefit of wisdom gleaned from experience, the Court delineated the contours of

---

[4] *See, e.g.*, *League of United Latin Am. Citizens v. Clements*, 999 F.2d 831, 857 (5th Cir. 1993) (explaining that Section 2 prohibits racial vote dilution but not partisan political defeat); *Campos v. City of Baytown*, 840 F.2d 1240, 1248 (5th Cir. 1988) (upholding factual determination that Black and Hispanic voters together constituted a cohesive majority coalition).

that principle. It made clear, for example, that a bizarre shape was not a prerequisite for a constitutional claim, *Miller v. Johnson*, 515 U.S. 900, 912-13 (1995), that race could not be used as a proxy for partisanship, *Bush v. Vera*, 517 U.S. 952, 968-69 (1996), and that the deliberate packing of minority voters in a district violates the Constitution, *Covington v. North Carolina*, 316 F.R.D. 117, 130 (M.D.N.C. 2016), *aff'd*, 137 S. Ct. 2211 (2017) (mem).

B. This Circumspect Approach Is Not Limited To Elections Cases.

This circumspect approach is hardly limited to election law. In *Brown*, the Court's approach was surgical: it announced a critical principle while avoiding unnecessary pronouncements that might have diminished the force of its holding. While a unanimous Court declared that "separate educational facilities are inherently unequal," 347 U.S. at 495, it left the specifics of antidiscrimination doctrine to develop over a series of fact patterns and institutional contexts, *see, e.g.*, *Keyes v. Sch. Dist. No. 1*, 413 U.S. 189 (1973); *Swann v. Charlotte-Mecklenburg Bd. of Educ.*, 402 U.S. 1 (1971); *Green v. Cty. Sch. Bd.*, 391 U.S. 430 (1968).

Other areas of constitutional law have similarly developed after this Court identified a manageable standard but demurred from announcing a particular test for assessing it. *Wilson v. Arkansas*, for example, declared that circumstances might exist where unannounced entry would be constitutional, but "le[ft] to the lower courts the task of determining the circumstances" when such an entry would survive scrutiny. 514 U.S. 927, 936 (1995). And *United States*

v. Lovasco announced the "fundamental conceptions of justice" standard for assessing the constitutionality of pre-indictment delays, but gave lower courts the opportunity to decide what facts met that standard. 431 U.S. 783, 790, 796-97 (1977).

Similar examples abound in such divergent fields as antidiscrimination law, *Harris v. Forklift Systems, Inc.*, 510 U.S. 17, 21-22 (1993); antitrust law, *FTC v. Actavis, Inc.*, 133 S. Ct. 2223, 2238 (2013); takings law, *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 416 (1922); patent law, *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 769 (2011); and remedies law, *State Farm Mutual Auto. Ins. Co. v. Campbell*, 538 U.S. 408, 425-26 (2003).

It is not surprising that the Court routinely follows this modest approach in adjudicating constitutional claims. While the Court is well-practiced at identifying workable standards, precise tests for implementing those standards are best developed over time. This careful approach allows the Court to take advantage of the experience and expertise accumulated across cases and contexts. Rather than trying to judge the merits of a statistical test entirely on its own, it is able to harness the energies of the adversarial process and assure itself of the reliability of the test. As Justice Gorsuch recently observed:

> Respectfully, it seems to me at least reasonably possible that the crucible of adversarial testing on which we usually depend, along with the experience of our thoughtful colleagues on the district and circuit benches, could yield insights (or reveal pitfalls) we cannot muster guided only by our

> own lights. . . . Other circuits may improve that guidance over time too. And eventually we can bless the best of it.

Maslenjak, 137 S. Ct. at 1931-32 (opinion of Gorsuch, J.).

C. Now Is The Time For The Court To Act.

Now is the moment for the Court to begin this important process of testing and reflection. As voters and legislators have become more loyal to their parties, partisan self-interest threatens to swamp the districting process. *See* Andrew Gelman & Gary King, *Estimating the Electoral Consequences of Legislative Redistricting*, 85 J. AM. STAT. ASSOC. 274, 281 (1990) (hereinafter Gelman & King); Nicholas O. Stephanopoulos & Eric M. McGhee, *Partisan Gerrymandering and the Efficiency Gap*, 82 U. CHI. L. REV. 831, 872 (2015). Gerrymanders are growing in effectiveness, dramatically amplifying the natural effects of population clustering. Samuel S.-H. Wang, *Three Tests for Practical Evaluation of Partisan Gerrymandering*, 68 STAN. L. REV. 1263, 1267-68 (2016) (hereinafter Wang, *Three Tests*).

In addition, new technology makes it increasingly easy for legislatures to craft partisan gerrymanders that "separate different populations of voters in exquisite detail." Wang, *Three Tests*, *supra*, at 1267. Because "[t]he first instinct of power is the retention of power," *McConnell*, 540 U.S. at 264 (Scalia, J., concurring in part and dissenting in part), these new tools create the risk that legislative majorities—if left to their own devices—will hold power indefinitely even if their political support substantially erodes.

Litigants and lower courts await the Court's guidance on this crucial issue. If the Court remains quiescent in advance of the 2020 Census, by which time the tools of redistricters will become even more effective, the representational harms of which plaintiffs complain will be inflicted on voters from both parties in districts across the country.

II. Partisan Symmetry Is A Workable Standard With Ancient Roots And Overwhelming Support From Social Scientists.

A workable standard for adjudicating partisan gerrymandering claims exists: partisan symmetry. The standard has already garnered interest from several Justices. *See LULAC*, 548 U.S. at 420 (opinion of Kennedy, J.); *id.* at 466 (opinion of Stevens, J.); *id.* at 483 (opinion of Souter, J.); *id.* at 492 (opinion of Breyer, J.). All but universally supported by social scientists, it is a robust standard that is easy to understand and to measure. While the absence of symmetry, standing alone, is not enough to establish a constitution violation, it should be part of the broader constitutional inquiry. The district court, for instance, deployed the symmetry principle as part of a three-part test to assess whether a map is the product of discriminatory intent, produces a severe and durable asymmetry, and lacks a legitimate neutral justification. *Whitford v. Gill*, 218 F. Supp. 3d at 884, 903-06.

Partisan symmetry is simple to define: a set of districts are symmetrical when reversing the outcome of the election—flipping each party's average district vote totals—would also reverse the number of seats won. *See, e.g.*, Wang, *Three Tests*, *supra*, at 1281;

Andrew Gelman & Gary King, *A Unified Method of Evaluating Electoral Systems and Redistricting Plans*, 38 AM. J. OF POL. SCIENCE 514 (1994). The standard makes no assumptions about the voting behavior of individual voters but simply assesses how a given plan translates votes into seats. Symmetry tests do not mandate proportional representation or require a particular ratio of seats to votes. They merely measure whether members of both parties have a chance to translate votes into seats in the same way.

A. Partisan Symmetry Is A Deeply Intuitive Standard With Ancient Roots.

Partisan symmetry is a deeply intuitive standard for measuring discrimination. It asks a simple question: what would happen if the tables were turned? This standard does not require the Court to micromanage legislators or usurp the role of a state's legislative branch. It simply requires a legislature to apply its chosen districting criteria in an evenhanded fashion. Just as it would be unfair if one candidate had to win many more votes within a district than his opponent in order to take office, so, too, it would be unfair if one party had to win many more votes than the other in order to win the same number of seats.

Needless to say, much of the statistical work in discrimination law is designed to answer the same question. In Title VII cases, for instance, the Court's aim is to test whether a black or female candidate was treated in the same fashion as a similarly situated white or male candidate. *See, e.g., Bazemore v. Friday*, 478 U.S. 385, 395-96 (1986) (per curiam). So, too, in housing discrimination cases, "testers" are used to determine whether landlords treat some homebuyers

differently than others. *Havens Realty Corp. v. Coleman*, 455 U.S. 363, 368 (1982).

While modern discrimination law is replete with examples of symmetry standards, the principle's roots are ancient. One finds, for instance, examples in Judeo-Christian ethics, *Genesis* 13:8-9; *Matthew* 7:12. The notion of turning the tables is so powerful that it is a canon of literature, WILLIAM SHAKESPEARE, A MIDSUMMER NIGHT'S DREAM; WILLIAM SHAKESPEARE, TWELFTH NIGHT; MARK TWAIN, THE PRINCE AND THE PAUPER (1881), music, W.S. GILBERT & ARTHUR SULLIVAN, H.M.S. PINAFORE (1878), and moral philosophy, JOHN RAWLS, A THEORY OF JUSTICE 73-78 (rev. ed. 1999). This measure of fairness is deployed across cultures. *See* CINDERELLA ACROSS CULTURES (Martine Hennard Dutheil de la Rochère et al. eds., 2016); Heather K. Gerken, *Second Order Diversity*, 118 HARV. L. REV. 1099, 1146 & n.124 (2005) (discussing Japanese tradition). Even children rely on the time-honored strategy of "I cut, you choose."

B. Social Scientists Resoundingly Support A Partisan Symmetry Standard.

Partisan symmetry is a principle that enjoys near universal support among social scientists. Needless to say, this type of unanimity is rare in academic circles. Since the measure was articulated in its modern form in 1987, *see generally* Gary King & Robert X. Browning, *Democratic Representation and Partisan Bias in Congressional Elections*, 81 AM. POL. SCI. REV. 1251 (1987), no social scientist has challenged its theoretical legitimacy or analytical force. Indeed, as Bernard Grofman and Gary King, the two political scientists who first brought partisan symmetry to the

Court's attention in *LULAC*, explain, "social scientists have long recognized partisan symmetry as the appropriate way to define partisan fairness . . . and for many years such a view has been virtually a consensus position of the scholarly community." Bernard Grofman & Gary King, *The Future of Partisan Symmetry as a Judicial Test for Partisan Gerrymandering After* LULAC v. Perry, 6 ELECTION L.J. 2, 6 (2007).

In the wake of this Court's discussion of partisan symmetry in *LULAC*, social scientists continued to refine the theoretical and methodological underpinnings of partisan symmetry. *E.g.*, Wang, *Three Tests*, *supra*; John F. Nagle, *Measures of Partisan Bias for Legislating Fair Elections*, 14 ELECTION L.J. 346 (2015); Michael D. McDonald & Robin E. Best, *Unfair Partisan Gerrymanders in Politics and Law: A Diagnostic Applied to Six Cases*, 14 ELECTION L.J. 312 (2015); Grofman & King, *supra*; Anthony J. McGann et al., *A Discernable and Manageable Standard for Partisan Gerrymandering*, 14 ELECTION L.J. 295 (2015); Stephanopoulos & McGhee, *supra*. Each of these articles has endorsed the partisan-symmetry standard. And no scholarly piece published after *LULAC* has cast doubt on this consensus. The standard is routinely used by plaintiffs and defendants in litigation. Indeed, *amici* Gary King and Jonathan N. Katz have deployed the standard while serving as expert witnesses for both parties. *See* Grofman & King, *supra*, at 15; *see also* Intervening Defendants' Brief in Response to the Court's April 24, 2002 Case Management Order at 3-5, *O'Lear v. Miller*, 222 F. Supp. 2d 850 (E.D. Mich. 2002) (No. 2:01-cv-72584-JAC-PJK); Petitioner's Opening Brief, *Maestas*

v. Hall, 274 P.3d 66 (N.M. 2012) (No. 33,387), 2012 WL 3236221, at *6, *24; Plaintiffs' Initial Closing Brief at 22, *Romo v. Detzner*, No. 2012-CA-000412, 2014 WL 3797315 (Fla. Cir. Ct. July 10, 2014) (Nos. 2012-CA-000412, 2012-CA-00490), 2014 WL 4254379.

In short, the standard has now been rigorously vetted and widely applied, and it remains the touchstone for measuring fairness in redistricting.

III. Partisan Symmetry Lends Itself To A Manageable Test With Many Doctrinal Virtues.

As a deeply intuitive and widely accepted measure of fairness, partisan symmetry has many virtues. Nonetheless, the Court should assure itself that a partisan-symmetry standard lends itself to a manageable test. While the Court need not endorse a particular test in this case, it must be sure that tests for partisan symmetry are reliable and difficult to manipulate. Symmetry tests should deploy actual election outcomes rather than hypothetical maps created by experts. Courts should be able to adapt the symmetry standard to different contexts and apply it without relying unduly on experts or displacing appropriate democratic judgments. Finally, symmetry tests should measure electoral opportunity rather than guarantee proportional victories and map cleanly onto the constitutional wrongs that animate redistricting law. Leading partisan-symmetry tests easily meet those conditions.

A. Partisan Symmetry Relies On The Most Basic Statistical Measures And Is Thus Transparent And Easy To Calculate Without Undue Reliance On Experts.

Partisan symmetry is transparent, easy to calculate, and does not require undue reliance on experts. Rooted in statistical science, symmetry tests are designed to figure out whether a given seat distribution is the product of traditional districting principles or partisan manipulation. Gelman & King, *supra*, at 280-82. It thus identifies genuine partisan discrimination while avoiding false positives. Calculating deviations from the standard is simple and straightforward. It is possible to identify deviations without the need for complex modeling. Indeed, most of the tests for measuring partisan asymmetry are as straightforward as the test this Court uses to determine violations of the one-person one-vote standard.

While a variety of methods exist for calculating deviations from partisan symmetry, at their core symmetry tests rely on well-known and well-accepted statistical methods widely used in classrooms and courts. They answer the key question in gerrymandering cases: whether each party has the same opportunity to translate votes into seats.

Once the basic operation is complete, the court is left with a symmetry score. All that is left to do is to assess whether the asymmetry is the result of a factor the Court may consider legitimate—such as traditional districting principles or political geography—rather than intentional discrimination.

Gauging the extent of partisan asymmetry is just as straightforward as identifying whether asymmetry exists in the first place. One need only rely on basic statistical methods. Statistical significance tests are almost three centuries old, measured in a fashion that is indifferent to the underlying cause, and developed entirely outside the context of redistricting. *See* John Arbuthnott, *An Argument for Divine Providence, Taken from the Constant Regularity Observ'd in the Births of Both Sexes*, 27 PHIL. TRANSACTIONS ROYAL SOC'Y 186 (1710). Indeed, the "Student's t-test" for comparing two averages, developed nearly a century ago by a beer brewer for quality control of hops, has become the most widely used test in all of science. *See* Student, *The Probable Error of a Mean*, 6 BIOMETRIKA 1 (1908); *see, e.g.*, RONALD A. FISHER, STATISTICAL METHODS FOR RESEARCH WORKERS 17 (11th ed. 1950); G. UDNY YULE & MAURICE G. KENDALL, AN INTRODUCTION TO THE THEORY OF STATISTICS 162-63 (3d ed. 1950); Richard Lowry, *Chapter 11: t-Test for the Significance of the Difference Between the Means of Two Independent Samples*, CONCEPTS AND APPLICATIONS OF INFERENTIAL STATISTICS, http://vassarstats.net/textbook/ch11pt1.html. Unsurprisingly, courts have long used such tests in a variety of legal contexts. *See Castaneda v. Partida*, 430 U.S. 482, 496 n.17 (1977) (explaining the concept of t-testing); *see also, e.g.*, *Matrixx Initiatives, Inc. v. Siracusano*, 563 U.S. 27, 40-41 (2011) (securities law); *General Elec. Co. v. Joiner*, 522 U.S. 136, 145-46 (1997) (expert testimony); *Bazemore*, 478 U.S. at 398 (per curiam) (employment discrimination).

Using these basic parameters, scholars have developed a range of partisan-symmetry tests that are

adaptable to a range of contexts. In a recent *Stanford Law Review* essay, for instance, *amicus* Samuel S.-H. Wang proposed three tests to evaluate partisan gerrymanders, all rooted in partisan symmetry. Wang, *Three Tests*, *supra*, at 1269. These tests search for disparities between the partisan makeup of the state and the number of seats won, discrepancies in the winning vote margins of the two parties (*i.e.*, lopsided wins by one party), and the construction of seats where a party performs above the state average. *Id.* at 1306-08. Other scholars have developed similar measures. *E.g.*, Grofman & King, *supra*; McDonald & Best, *supra*; Nagle, *supra*; Stephanopoulos & McGhee, *supra*; Gelman & King, *supra*.

Many of these tests are as simple as the test this Court uses to assess one-person one-vote violations. One of Professor Wang's three symmetry tests involves comparing only two factors: the share of Democratic votes in the districts that Democrats win and the share of Republican votes in the districts that Republicans win. Wang, *Three Tests*, *supra*, at 1306. Calculating the significance of the difference using Student's t-test is hardly more complicated than the three-part test for one-person, one-vote violations that this Court described in *Vieth*, 541 U.S. at 290 (plurality opinion). Indeed, as Professor Wang states, the test is performed using Student's t-test and can be "worked out using a spreadsheet program such as Microsoft Excel," with no statistical background required. Wang, *Three Tests*, *supra*, at 1308-09.

Another of Professor Wang's tests detects gerrymanders by comparing each party's median vote share across districts to its mean vote share. *Id.* at 1306-07. This "mean-median difference" is well over a

century old. *See* Karl Pearson, *Contributions to the Mathematical Theory of Evolution, II: Skew Variation in Homogeneous Material*, PHIL. TRANSACTIONS ROYAL SOC'Y (1895) at 343-414. It is similarly straightforward. Just as "judges can multiply and divide," *Karcher*, 462 U.S. at 751 (Stevens, J., concurring), they can add and subtract. As a result, determining partisan asymmetry does not require undue reliance on statisticians or other experts.

Partisan-symmetry tests thus possess a significant advantage over standards that the Court has rejected in the past. Unlike proposals this Court has previously discarded, partisan-symmetry analysis does not require the creation of "hypothetical district[s]." *Vieth*, 541 U.S. at 349 (Souter, J., dissenting).

B. Partisan-Symmetry Tests Differ Fundamentally From A Proportional Representation Standard.

Partisan symmetry differs fundamentally from a "proportional representation" standard, which this Court has made clear the Constitution does not require. *See LULAC*, 548 U.S. at 403. Partisan-symmetry tests need not demand any equivalence between the number of votes won and the number of seats won. *See* Wang, *Three Tests*, *supra*, at 1285-86. Instead, they merely ask whether each side has roughly the same opportunity to translate votes into seats. For instance, a map would be perfectly symmetrical if a party that wins 60% of the average district vote receives 80% of the seats, provided that the opposing party could do the same.

C. Partisan Symmetry Tests Can Distinguish Between Partisan Manipulation And The Effects Of Traditional Districting Principles.

Another important feature of partisan symmetry tests is that they can distinguish the effects of partisan interference in the districting process from the effects of traditional districting principles, such as compactness and contiguity. Wang, *Three Tests*, *supra*, at 1319-20. Simple simulation techniques that employ real electoral returns can be used to tease out the effects—if any—of voter clustering and political geography to any observed asymmetries. *See* Wang, *Three Tests*, *supra*, at 1289-98; *see also* Wendy K. Tam Cho & Yan Y. Liu, *Toward a Talismanic Redistricting Tool: A Computational Method for Identifying Extreme Redistricting Plans*, 15 ELECTION L.J. 351 (2016); Jowei Chen & Jonathan Rodden, *Cutting Through the Thicket: Redistricting Simulations and the Detection of Partisan Gerrymanders*, 14 ELECTION L.J. 331 (2015); Michael Altman & Michael P. McDonald, *BARD: Better Automated Redistricting*, 42 JOURNAL OF STATISTICAL SOFTWARE 1 (2011); Benjamin Fifield et al., *A New Automated Redistricting Simulator Using Markov Chain Monte Carlo*, available at http://imai.princeton.edu/research/files/redist.pdf.

Like the other tests discussed here, mathematical simulation is hundreds of years old, *see* Georges Louis Leclerc Buffon, Histoire Naturelle, Générale et Particulière 100-04 (Supplèment, Tome Quatrième (1777)), and has been used in its modern form at least since the development of the atomic bomb, *see* RICHARD RHODES, THE MAKING OF THE ATOMIC BOMB 522-60 (1986). Conceptually no more complicated than

drawing numbers from a hat, these simulations are easily done on a desktop computer or using publicly available software tools. *See, e.g.*, PRINCETON GERRYMANDERING PROJECT, gerrymander.princeton.edu.

D. Because Symmetry Tests Do Not Rely On Subjective Judicial Judgments, They Generate Highly Predictable Measures That Do Not Displace Appropriate Districting Criteria.

The simplicity of partisan-symmetry tests leads to other doctrinal virtues. These tests are difficult to manipulate because they do not lend themselves to subjective judgments. Judges, for instance, need not adjudicate what those in districting circles deride as "beauty contests" among competing plans. *Vera*, 517 U.S. at 977.

Because partisan-symmetry tests do not deploy difficult-to-replicate analyses that depend heavily on the judgments of experts, they generate stable, highly predictable measures of fairness that are accessible to legislators and citizens alike. *See* Andrew Gelman, Gary King, & Andrew Thomas, *JudgeIt II: A Program for Evaluating Electoral Systems and Redistricting Plans* (2010), *available at* http://j.mp/2ovSNfh. Symmetry tests are easy to assess in advance and difficult to manipulate during litigation, something that is especially appropriate in context like this one. They thus are "judicially discernible and manageable." *Davis v. Bandemer*, 478 U.S. 109, 123 (1986) (plurality opinion).

Nor do partisan-symmetry tests displace appropriately democratic criteria. See *White v. Weiser*,

412 U.S. 783, 795-96 (1973) (reminding courts remedying one person, one vote violations to "honor state policies" and not disregard "important state interests," nor "pre-empt the legislative task"). In resolving cases using the partisan-symmetry standard, judges need not impose any particular districting criteria on legislatures. A legislature can choose which districting criteria it values most—and how to rank those criteria relative to one another—so long as it applies them fairly to both sides. All that courts need ask of legislatures is that they not discriminate against those who subscribe to a competing agenda.

E. Symmetry Tests Measure Opportunity, Not Outcome, And Are Thus Tailored To The Constitutional Harm At Issue.

Partisan-symmetry tests measure opportunity, not outcomes. They assess how easy it is for each party to translate popular support into political power but do not guarantee success at the polls. *See* Gelman & King, *supra*. Courts will step in only when a districting plan makes it much more difficult for voters of one party to enact their ideas than voters of the other party given the same support among voters—precisely the sort of discrimination that has concerned the Court and Congress in the context of race. *See LULAC*, 548 U.S. at 438-39; *Gingles*, 478 U.S. at 46.

For these reasons, the symmetry standard is well-tailored to the constitutional wrongs at issue in this case. Because partisan symmetry simply requires that one side not be substantially disadvantaged by district lines, it accurately measures whether the state has denied voters the equal protection of the laws. And

because it measures the ability of voters to convert ideas into majorities—and thus to translate speech into action—it appropriately reflects the First Amendment considerations on which the opinion below rested. *Whitford v. Gill*, 218 F. Supp. 3d at 880-84; *see Vieth*, 541 U.S. at 314-15 (Kennedy, J., concurring in the judgment).

F. Partisan Symmetry Tests Are Flexible And Can Be Deployed Simultaneously To Ensure That Judges Can Identify Extreme Outliers And Be Confident In The Robustness Of Their Findings.

Partisan-symmetry tests offer a final, distinctive advantage. Partisan-symmetry tests all answer the same, simple question and rely on a shared standard. But they are flexible enough to accommodate contextual differences, thus allowing courts to choose the test best suited for assessing a particular plan. *See, e.g.*, Wang, *Three Tests*, *supra*, at 1306-09; *see also* Samuel S.-H. Wang, *Three Practical Tests for Gerrymandering: Application to Maryland and Wisconsin*, 15 ELECTION L.J. 367, 377-81 (2016) (hereinafter Wang, *Application*).

More importantly, a court can assess a districting plan using more than one symmetry test. Extreme gerrymanders will certainly perform poorly along more than one symmetry measure. Judges can thereby use multiple symmetry tests to assure themselves of the robustness of their assessment and identify extreme outliers.

IV. Wisconsin's Legislative Districts Would Fail Under Virtually Any Partisan-Symmetry Test The Court Might Choose.

In this case, for instance, Wisconsin's plan performs poorly under virtually any measure of partisan symmetry. After the 2010 redistricting, Democratic wins have been more lopsided compared with Republican wins. In the 2010 elections, legislators in the two parties won approximately equal-sized victories on average: 65% of the two-party vote for Democratic legislators and 66% for Republican legislators.[5] But in 2012, immediately after redistricting, the average Democratic win jumped to 69%, while the average Republican win fell to 60%. The difference, nine percentage points, is highly unlikely to have arisen in the absence of intentional discrimination. *Indeed, the probability that this disparity was an unintentional product of a neutral districting process is less than one in ten million.* And vote-share difference persisted into subsequent elections. *See, e.g.*, Wang, *Application*, *supra*, at 380. Again, as a statistical matter, it is highly unlikely that this disparity, which has persisted across three election cycles, was the product of traditional districting principles.

A second test, the mean-median difference, is well suited to closely divided states such as Wisconsin. The mean-median difference is easy to calculate, and can

---

[5] These numbers were calculated using standard imputations from the "State Legislative Election Returns" data set. CARL KLARNER ET AL, STATE LEGISLATIVE ELECTION RETURNS DATA, 1967-2010 (Harvard Dataverse V1, hdl:1902.1/20401, UNF:5:q/n5C9RQGfjy6AjbLG6JWQ==, 2013).

be figured with a pencil and paper or a hand calculator. It derives from the mean and the median, two statistical quantities that are usually taught to schoolchildren by the sixth grade. *See* Sam Wang, *Let Math Save Our Democracy*, N.Y. TIMES, Dec. 5, 2015.

After redistricting, in 2012 the average Democratic vote share across all districts was 51.5% and the median vote share was 45.7%. That result would have occurred unintentionally in less than one out of 100,000 cases. Wang, *Application*, *supra*, at 380. Again, this disparity persisted across three election cycles. *Id.*

Just as these results are highly unlikely to have arisen unintentionally, they cannot be explained by voters' geographical sorting or other nonpartisan mechanisms. Although Appellants claim that "the facts of political geography" complicate partisan-symmetry analysis, J.S. 34, partisan-symmetry tests can take those facts into account.

Such an exercise would not be necessary in Wisconsin, where partisan asymmetry effectively arose overnight, immediately after redistricting. Needless to say, the political geography of Wisconsin did not change radically during this short period.

In this case, all partisan-symmetry tests point to the same conclusion: in Wisconsin, partisans deliberately crafted legislative districts to insulate themselves from defeat. Those districts ensured one party could put its ideas into action while denying its opponents a fair opportunity to translate votes into a legislative majority. For these reasons, the Court should adopt a partisan-symmetry standard to adjudicate partisan gerrymandering claims and strike

down Wisconsin's egregiously gerrymandered Assembly maps.

CONCLUSION

The judgment of the district court should be affirmed.

Respectfully submitted,

Kevin K. Russell
GOLDSTEIN &
RUSSELL, P.C.
7475 Wisconsin Ave.
Suite 850
Washington, DC 20814

Heather K. Gerken
Counsel of Record
127 Wall Street
New Haven, CT 06511
(203) 432-1660
heather.k.gerken@
yale.edu